

and including June 17, 2003, and have paid the requisite fee [37 C.F.R. §§ 1.136(a), 1.17(a)(3)].

Applicants submit concurrently herewith a Declaration of Jack L. Strominger, M.D., D.Sc., under 37 C.F.R. § 1.132.

Kindly amend the application as follows:

IN THE CLAIMS\*\*:

Please amend claims 76-79 and 94-96 to read as follows:

76. (Amended) An HLA-DR typing process comprising the steps of:

(a) hybridizing DNA in a sample to be typed to a DNA sequence, said DNA sequence being capable of hybridizing to a polymorphic region of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex to allow determination of one or more HLA-DR alleles, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:

- (i) DNA sequences encoding amino acids 8-14 of said locus;
- (ii) DNA sequences encoding amino acids 26-32 of said locus;
- (iii) DNA sequences encoding amino acids 72-78 of said locus; and
- (iv) DNA sequences which are fully complementary to any of the foregoing DNA sequences, and

(b) detecting areas of hybridization between said DNA in said sample and said DNA sequence.

77. (Amended) An HLA-DR typing process comprising the steps of:

- (a) restricting a first DNA isolated from an individual to be typed with at least one restriction endonuclease;
- (b) size-fractionating said restricted DNA;
- (c) hybridizing said size-fractionated DNA to be typed to a second DNA, said second DNA being capable of hybridizing to a polymorphic region of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex to allow determination of one or more HLA-DR alleles, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:
  - (i) DNA sequences encoding amino acids 8-14 of said locus;
  - (ii) DNA sequences encoding amino acids 26-32 of said locus;
  - (iii) DNA sequences encoding amino acids 72-78 of said locus; and
  - (iv) DNA sequences which are fully complementary to any of the foregoing DNA sequences, and

(d) detecting areas of hybridization between said size-fractionated DNA and said second DNA.

78. (Twice Amended) An HLA-DR typing process comprising the steps of:

(a) hybridizing DNA in a sample to be typed to a DNA sequence, said DNA sequence being capable of hybridizing to a polymorphic region of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex to allow determination of one or more HLA-DR alleles, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:

(i) DNA sequences encoding a majority of the amino acid sequence of amino acids 8-14, 26-32 or 72-78 of a polypeptide sequence coded for by DNA insert DR- $\beta$ -A, DR- $\beta$ -B or DR- $\beta$ -C; and

(ii) DNA sequences which are fully complementary to any of the foregoing sequences, and

(b) detecting areas of hybridization between said DNA in said sample and said DNA sequence.

79. (Twice Amended) An HLA-DR typing process comprising the steps of:

(a) restricting a first DNA isolated from an individual to be typed with at least one restriction endonuclease;

(b) size-fractionating said restricted DNA;

(c) hybridizing said size-fractionated DNA to be typed to a second DNA, said second DNA being capable of hybridizing to a polymorphic region of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex to allow determination of one or more HLA-DR alleles, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:

(i) DNA sequences encoding a majority of the amino acid sequence of amino acids 8-14, 26-32 or 72-78 of a polypeptide sequence coded for by DNA insert DR- $\beta$ -A, DR- $\beta$ -B or DR- $\beta$ -C; and

(ii) DNA sequences which are fully complementary to any of the foregoing sequences, and

(d) detecting areas of hybridization between said size-fractionated DNA and said second DNA.

94. (Amended) An HLA-DR typing kit comprising a DNA sequence selected from the group consisting of:

- (i) DNA sequences encoding amino acids 8-14 of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex;
- (ii) DNA sequences encoding amino acids 26-32 of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex;
- (iii) DNA sequences encoding amino acids 72-78 of an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex; and
- (iv) DNA sequences which are fully complementary to any of the foregoing DNA sequences.

95. (Amended) An HLA-DR typing kit comprising a DNA sequence which hybridizes to an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex, said DNA sequence being capable of hybridizing to a polymorphic region of said locus to allow determination of one or more HLA alleles for use in HLA-DR- $\beta$  typing, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:

- (i) DNA sequences encoding amino acids 8-14 of said locus;

- (ii) DNA sequences encoding amino acids 26-32 of said locus;
- (iii) DNA sequences encoding amino acids 72-78 of said locus; and
- (iv) DNA sequences which are fully complementary to any of the foregoing DNA sequences.

96. (Amended) An HLA-DR typing kit comprising a DNA sequence which hybridizes to an HLA-DR- $\beta$  chain locus of the human lymphocyte antigen complex, said DNA sequence being capable of hybridizing to a polymorphic region of said locus to allow determination of one or more HLA alleles for use in HLA-DR- $\beta$  typing, said polymorphic region being encoded by a DNA sequence selected from the group consisting of:

- (i) DNA sequences encoding a majority of the amino acid sequence in a region consisting essentially of amino acids 8-14, 26-32 or 72-78 of a polypeptide sequence coded for by DNA insert DR- $\beta$ -A, DR- $\beta$ -B or DR- $\beta$ -C; and
- (ii) DNA sequences which are fully complementary to any of the foregoing sequences.